



**UNITED STATES DEPARTMENT OF COMMERCE**  
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APPLICATION NO. 35-61548	FILING DATE 12/14/95	FIRST NAMED INVENTOR KANeko	ATTORNEY DOCKET NO. N 35-61548
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EXAMINER CUNEO, K
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ART UNIT 2109	PAPER NUMBER
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DATE MAILED: 11/26/96

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**08/528,538**

Applicant(s)  
**Norio Kaneko**

Examiner  
**Kamand Cuneo**

Group Art Unit  
**2109**



- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

- ☒ Claim(s) 1-21 is/are pending in the application.
- Of the above, claim(s) 9-21 is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-8 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The drawing(s) filed on Sep 14, 1995 is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been
- ☒ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3, 5, 6
- ☐ Interview Summary, PTO-413
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Restriction*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-8, drawn to the product, classified in class 174, subclass 125.1.
  - II. Claims 9-21, drawn to the process of making, classified in class 29, subclass 599.
  
2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Groups II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (M.P.E.P. § 806.05(f)). In the instant case, the oxide superconductor can be formed by materially different processes such as those set forth by claims 9 and 15.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Ms. Kathryn Sieburth, Reg. No. 40072, on 11/6/1996 a provisional election was made with traverse to prosecute the invention of

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Group I, claims 1-8. Affirmation of this election must be made by applicant in responding to this Office action. Claims 9-21 are withdrawn from further consideration by the examiner, 37 C.F.R. 1.142(b), as being drawn to a non-elected invention.

### *Drawings*

4. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required if the application is allowed. See attached form PTO 948.

5. Figure 1 is objected to, because all parts shown in section must be cross hatched according to M.P.E.P § 608.01.

### *Specification*

6. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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At line 1, please change "having a" to "which is a" so that the structure of the invention is clearly expressed.

At line 3, please change "of which" so that it is clear whether the periphery of the wire is in discussion or the periphery of the oxide line.

Please delete lines 6-11 and "and a manufacturing" from the end of line 5.

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. A suggested title is Oxide Superconducting Wire With Silver dispersed Within and a Conductive Coating On Its Surface.

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

*Treatment of Claims Based on Language and Format*

Please note that each of the line numbers referenced below, with regards to the claims only, is the actual number of the line in the claim and is not the page line number shown in the application.

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9. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Explanation of the vague and indefinite items follows:

In claim 1, line 3, "therein" and "thereof" are vague, because it is not clear whether they refer to the wire or the oxide line.

Claim 3 is vague, because the range of the two sets claimed in the alternative differ in scope. Alloys of the stated metals constitute a much narrower range than "a metal." This use of a narrower range as an alternative renders the scope of the claim vague.

In claim 4, line 5, the formula stated is vague, because the claim does not state what the dots at the end of the formula and the variables a, b, c and x represent. A suggested correction is including the meaning of the dots and the variables in claim 4. Please note that the range specified for the variables does not suffice as a definition.

In claim 5, line 5, the formula stated is vague, because the claim does not state what the dots at the end of the formula and the variables a, b, c, d and x represent. A suggested correction is including the meaning of the dots and the variables in claim 5.

In claim 6, line 5, the formula stated is vague, because the claim does not state what the dots at the end of the formula and the variables a, b, c, e, f and g represent. A suggested

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correction is including the meaning of the dots and the variables in claim 6.

In claim 7, line 5, the formula stated is vague, because the claim does not state what the dots at the end of the formula and the variables a, b, c and d represent. A suggested correction is including the meaning of the dots and the variables in claim 7.

In claim 8:

At line 3, "of" which appears after "elements" is confusing. A suggested correction is deleting "of."

At line 7, please add "formed by Cu and O" after "pentahedron," and add "formed by Ti and O" after "octahedron" for clarity.

At line 8, "two dimensional" is vague, because the recited polyhedrons are three dimensional and so do not have a two dimensional relation.

#### *Treatment of Claims Based on Prior Art*

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hayashi,

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reference column 2 at lines 34-36, 41-49.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi, as applied to claims 1-3 above, further in view of Den et al. (538). Hayashi discloses the claimed invention except for the superconducting oxide being Ln-Sr-Cu-M-O. Den et al. (538) discloses this type of superconducting oxide, reference the abstract. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the superconducting oxide of Den et al. (538) in the wire of Hayashi, because this type of superconducting oxide is one of many oxides known in the art for making superconducting wires.

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi, as applied to claims 1-3 above, further in view of Toreki et al. Hayashi discloses the claimed invention except for the superconducting oxide being Ln-Ca-Sr-Cu-M-O. Toreki et al. discloses this type of superconducting oxide, reference the abstract. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the superconducting oxide of Toreki et al. in the wire of Hayashi, because this type of superconducting oxide is one of many oxides known in the art for making superconducting



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wires.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi, as applied to claims 1-3 above, further in view of Akimitsu et al. Hayashi discloses the claimed invention except for the superconducting oxide being Ln-Ca-Sr-Ba-Cu-O-C. Akimitsu et al. discloses this type of superconducting oxide, reference page 3 formula (1-A). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the superconducting oxide of Akimitsu et al. in the wire of Hayashi, because this type of superconducting oxide is one of many oxides known in the art for making superconducting wires.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi, as applied to claims 1-3 above, further in view of Den et al. (542). Hayashi discloses the claimed invention except for the superconducting oxide being Ln-Ca-Sr-Ba-Cu-B-O. Den et al. (542) discloses this type of superconducting oxide, reference the abstract. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the superconducting oxide of Den et al. (542) in the wire of Hayashi, because this type of superconducting oxide is one of many oxides known in the art for making superconducting wires.

15. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi, as applied to claims 1-3 above, further in view of Toreki et al. Hayashi discloses the claimed

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invention except for the superconducting oxide comprising Ln-M-Ba-Ti-Cu-O. Toreki et al. discloses this type of superconducting oxide, reference column 2 at line 3. Further, the particular geometry of the molecular structure is determined by the atomic properties of the constituent elements and is inherent to the substance. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the superconducting oxide of Toreki et al. in the wire of Hayashi, because this type of superconducting oxide is one of many oxides known in the art for making superconducting wires.

16. A list of prior art, made of record but not relied upon, which is considered pertinent to the applicant's disclosure follows:

- |                  |  |
|------------------|--|
| Anderson et al.  | discloses use of silver in superconducting oxides for increasing current density.      |
| Yurek et al.     | discloses use of a silver in superconducting oxides for enhancing mechanical strength. |
| Sibata et al.    | discloses a composite of superconducting oxides and silver.                            |
| Wong et al.      | discloses a composite of superconducting oxide and silver.                             |
| Yamamoto et al.  | discloses a noble metal conductive coating on a superconductor.                        |
| Yamaguchi et al. | discloses composite of a superconducting oxide and lead in a conductive sheath.        |
| Mandigo et al.   | discloses composite of a superconducting oxide and silver in a conductive sheath.      |

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Ferrando discloses silver coated oxide superconducting grains.

Okada et al. discloses composite of a superconducting oxide and silver in a  
conductive sheath (example 2).

Any inquiries concerning this communication or earlier communications from the  
examiner should be directed to Examiner Kamand Cuneo at (703) 308-1233. Examiner  
Cuneo's supervisor is Mrs. Kristine Kincaid whose telephone number is (703) 308-0640.

*Kristine L. Kincaid*  
KRISTINE L. KINCAID  
SUPERVISORY PATENT EXAMINER  
GROUP 2100

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November 13, 1996